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REMARKS/ARGUMENTS

The above Amendments and these Remarks are in reply to the Office Action mailed August 17, 2006. Claims 22-42 were pending in the Application prior to the outstanding Office Action. In the Office Action, the Examiner (1) rejected claims 26-29 under 35 U.S.C. § 112, second paragraph, as being indefinite; (2) rejected claims 22-25, 30-35, and 37-42 under 35 U.S.C. 103(a) as being unpatentable over Huebner (U.S. Pat. 4,950,377) in view of Obinata (U.S. Pat. 4,624,767); and (3) objected to claims 36 and 26-29, but stated the claims would be allowable if rewritten.

I. Claim Rejections - 35 U.S.C. § 112

With respect to the rejected claims 26-29 under 35 U.S.C. 112, second paragraph, as being indefinite, Applicant has amended the claims to overcome the Examiner's rejection.

Specifically, Applicant has amended claim 26 to be dependent on claim 22 (instead of being dependent on cancelled claim 21).

With the amended claim 26, Applicant submits that the term "the capacitor" of claim 26, line 2 now has the antecedent basis of "a capacitor" of claim 22, line 6.

Applicant has also amended claim 29 per the Examiner's suggestion.

II. Claim Rejections - 35 U.S.C. § 103

With respect to the rejection of claims 22-25, 30-35, and 37-42 under 35 U.S.C. 103(a) as being unpatentable over Huebner in view of Obinata, Applicant submits that these references do not render the present application obvious because both of these two references fail to teach an element of the present invention, which is providing a relatively strong electric field at a first position and providing a relatively weak electric field at a second position. This element, together with other elements of the present invention, provide the etching of the surface of the insulating layer without pitting.

Applicant submits that Huebner discloses a high frequency generator HG (for generating a high frequency voltage U_H) and a low frequency G (for generating a low frequency voltage U) within a process chamber. Applicant submits that Huebner is silent

with respect to the relative voltages (and thus the relative electric fields) generated by these generators HG and G.

Instead, Huebner discloses that the low frequency voltage U has a frequency from 50kHz to a few hundred kHz, and the high frequency voltage has a frequency in the MHz regions. Thus, Huebner discloses an electric field with high frequency near the first electrode E1, and an electric field with low frequency near the first electrode E2.

Further, Applicant submits that Huebner discloses a magnetic field having relative magnetic field strength, relatively stronger magnetic field near the first electrode E1 and relatively weaker magnetic field near the second electrode E2. As a result of the variation in the magnetic field, the plasma is concentrated closer to the first electrode E1, confining the electrons in this region to provide ionization and high ion density. (Col. 3, lines 62-67).

Thus Applicant submits that Huebner fails to teach providing a relatively strong electric field and a relatively weak electric field, positioned with a magnetic field to obtain movements of electrons and ions for etching an insulator surface. The relative electric fields according to the present invention are an innovative component in providing an unexpected benefit of substantially uniform etching without pitting the insulator layer.

Applicant submits that Obinata discloses an apparatus for confinement of plasma between two electrodes. Obinata also fails to teach providing a relatively strong electric field and a relatively weak electric field, positioned with a magnetic field to obtain movements of electrons and ions for etching an insulator surface. Thus, Applicant submits that the present invention is not obvious following the teaching of both Huebner and Obinata.

The dependent claims depend on the independent claims, and thus should be allowed per at least the reasons stated above.

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III. Allowable Subject Matter

Applicant appreciates the indication that claims 26-29 and 36 are allowable.

IV. Conclusion


In light of the above, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and a timely Notice of Allowance is respectfully requested.

The Commissioner is hereby authorized to charge any deficiencies or credit overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

Dated: _____

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